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EXAMINER	
JACOBS, LASHONDA T	

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2157	

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11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/684,490	GELVIN ET AL.	
	Examiner	Art Unit	
	LaShonda T. Jacobs	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5-7, 9-10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-76** are rejected under 35 U.S.C. 102(e) as being anticipated by Jones et al (hereinafter, "Jones", 6,430,164).

As per claim **1**, Jones discloses a vehicle internetwork comprising:

- a plurality of network elements including at least one node and at least one vehicle bus coupled among at least one peripheral electronic device, wherein functions of the plurality of network elements are remotely controllable, wherein the at least one node manipulates node information including configuration and security information to provide secure interoperability among the plurality of network elements and the at least one peripheral electronic device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-4, lines 54-67 and col. 6, lines 1-16).

As per claim **2**, Jones discloses:

- wherein the at least one vehicle bus comprises at least one bus selected from a group consisting of at least one Original Equipment Manufacturer (OEM) bus, at least one AutomotiveMultimedia Interface Consortium (AMI-C) bus, at least one external

network, and at least one local development network (col. 4, lines 49-67 and col. 5, lines 1-4).

As per claim **3**, Jones discloses:

- wherein the at least one local development network accesses the at least one node for the performance of application upgrades, diagnostics, and programming (abstract and col. 2, lines 1-49).

As per claim **4**, Jones discloses:

- wherein the at least one local development network supports manipulation and transfer of entertainment software, wherein the entertainment software comprises at least one entertainment feature selected from a group consisting of video, audio, movies, television shows, music, games, and simulations (col. 2, lines 1-49 and col. 5, lines 15-53).

As per claim **5**, Jones discloses:

- wherein the at least one vehicle bus comprises at least one legacy automotive bus selected from a group consisting of Audio Control Protocol (ACP) buses and Standard Corporate Protocol (SCP) buses (col. 4, lines 49-67 and col. 5, lines 1-4).

As per claim **6**, Jones discloses:

- wherein the at least one peripheral electronic device comprises at least one device coupled to at least one OEM bus selected from a group consisting of climate control devices, actuator devices, position location devices, Global Positioning System (GPS) devices, communication devices, cellular telephony devices, processing devices, diagnostic devices, modems, video devices, audio devices, multimedia devices,

electronic game devices, sensor devices, switch devices, and device subnetworks (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54 and col. 6, lines 1-16).

As per claim **7**, Jones discloses:

- wherein the at least one peripheral electronic device comprises at least one device coupled to at least one AMI-C bus selected from a group consisting of communication devices, position location devices, GPS devices, communication devices, pager devices, cellular telephony devices, processing devices, modems, video devices, audio devices, multimedia devices, electronic game devices, personal digital assistants (PDAs), and wireless local area network (LAN) devices (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54 and col. 6, lines 1-16).

As per claim **8**, Jones discloses:

- wherein the at least one node comprises at least one interface port selected from a group consisting of Intelligent Data Bus (IDB-C) ports, MOST ports, Institute of Electrical and Electronics Engineers (IEEE) 1394 ports, On-Board Diagnostic-11 (OBD-Il) ports, Standard Corporate Protocol (SCP) ports, Audio Control Protocol (ACP) ports, Bluetooth ports, Personal Communications Service (PCS) ports, Global System for Mobile Communications (GSM) ports, and Ethernet ports (abstract, col. 2, lines 1-25, col. 4, lines 49-67 and col. 5, lines 1-4).

As per claim **9**, Jones discloses:

- wherein the functions are hosted on a central network element, wherein the functions are distributed among the plurality of network elements in response to a coupling of

additional peripheral electronic devices to the at least one vehicle bus (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-67 and col. 6, lines 1-16).

As per claim **10**, Jones discloses:

- wherein the at least one node includes at least one gateway node and at least one port node, wherein the at least one node provides at least one function selected from a group consisting of data processing, data storage, access control, protocol translation, security including service discovery and device authentication, and network control (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-67, col. 6, lines 1-16 , col. 17, line 67 and col. 18, lines 1-55).

As per claim **11**, Jones discloses:

- wherein the at least one gateway comprises at least one interface port, at least one real-time interface processor (RTIP), and at least one application processor, wherein the at least one RTIP performs real-time operations and the at least one application processor performs high level processing functions (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 16 and col. 18, lines 1-55).

As per claim **12**, Jones discloses:

- wherein the at least one gateway functions as an Internet Protocol (IP) router, wherein the at least one RTIP comprises a high-speed bus controlled by at least one coupled device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, lines 67 and col. 18, lines 1-55).

As per claim **13**, Jones discloses:

- wherein the at least one interface port has at least one function selected from a group consisting of a tag, a bridge, and an interface (col. 17, line 67 and col. 18, lines 1-55).

As per claim **14**, Jones discloses:

- wherein the at least one interface port includes at least one port selected from a group consisting of wired communication ports and wireless communication ports (col. 17, line 67 and col. 18, lines 1-55).

As per claim **15**, Jones discloses:

- wherein the at least one gateway includes a first gateway coupled to a second gateway (col. 17, line 67 and col. 18, lines 1-55).

As per claim **16**, Jones discloses:

- wherein the at least one port node is coupled to at least one subnetwork (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67 and col. 18, lines 1-55).

As per claim **17**, Jones discloses:

- wherein the at least one gateway node couples a first vehicle bus and a second vehicle bus, wherein the at least one port node couples the at least one vehicle bus to the at least one peripheral electronic device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67 and col. 18, lines 1-55).

As per claim **18**, Jones discloses:

- wherein the at least one port node comprises at least one device selected from a group consisting of at least one processor, at least one memory cache, at least one wireless modem, at least one network protocol, at least one policy, and at least one wired local

area network (LAN) (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **19**, Jones discloses:

- wherein the at least one port node comprises at least one device selected from a group consisting of at least one micro real-time interface processor (RTIP), at least one appliance interface, at least one communication interface, and at least one memory device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **20**, Jones discloses:

- wherein the at least one appliance interface is coupled to at least one sensor, wherein the at least one communication interface is coupled to at least one radio (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **21**, Jones discloses:

- wherein the at least one port node comprises at least one port node selected from a group consisting of a serial network interface connector (SNIC) and a public network port (PNP), wherein the at least one port node interacts with at least one corresponding proxy to enable the at least one peripheral electronic device to operate within the network (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **22**, Jones discloses:

- wherein the at least one node comprises at least one hybrid switch, wherein the at least one hybrid switch includes at least one interface port coupled among at least one switch of a first speed and at least one switch of a second speed, wherein each of the at least one switch of a first speed and the at least one switch of a second speed are coupled to at least one port (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **23**, Jones discloses:

- wherein the at least one hybrid switch distributes at least one switching function among the plurality of network elements of a host vehicle (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **24**, Jones discloses:

- wherein at least one application of a first type is coupled through the at least one port to the at least one switch of a first speed, wherein at least one application of a second type is coupled through the at least one port to the at least: one switch of a second speed (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **25**, Jones discloses:

- wherein the at least one node couples to at least one subnetwork, wherein the at least one subnetwork comprises at least one device selected from a group consisting of sensor devices, actuator devices, wired network devices, and wireless network devices

(abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **26**, Jones further discloses:

- at least one router that couples to the Internet using at least one device selected from a group consisting of at least one bus and at least one communication device, wherein the at least one bus is selected from a group consisting of an IEEE 1394 bus, a MOST bus, an 11313-C bus, and an Ethernet bus, wherein the at least one communication device is selected from a group consisting of a Bluetooth modem, an IEEE 802.11 radio, and a mobile telephone (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **27**, Jones discloses:

- wherein the at least one node generates at least one hierarchy of communication alternatives in response to a determined position of a host vehicle, wherein a selected communication alternative is used to communicate with at least one local site (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **28**, Jones discloses:

- wherein data processing is controlled using at least one processing hierarchy that controls at least one event selected from a group consisting of data classifications, data transfers, data queuing, data combining, processing locations, and communications among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67,

col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **29**, Jones discloses:

- wherein the functions are distributed among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **30**, Jones discloses:

- wherein the functions of the at least one node include at least one function selected from a group consisting of data acquisition, data processing, communication management, data routing, data security, programming, node operation, protocol translation, network management, and interfacing with at least one communication physical layer including cellular telephony, wireline telephone, satellite telephony, packet radio, microwave, optical (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **31**, Jones discloses:

- wherein data processing functions of at least one peripheral electronic device are distributed among at least one other processor selected from a group consisting of the at least one node and the at least one peripheral electronic device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **32**, Jones discloses:

- wherein the at least one node implements at least one security method selected from a group consisting of confounder codes, encrypted transmissions, security policy-based communication protocols, blocking coupling with unauthorized devices, and blocking commands from at least one class of device (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **33**, Jones discloses:

- wherein the at least one security method is implemented in at least one gateway node and at least one port node (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **34**, Jones discloses:

- wherein the at least one security method includes blocking denial of service attacks by decoupling at least one port node through which unauthorized access is attempted and blocking at least one application at a decoupled port node (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **35**, Jones discloses:

- wherein the at least one security method further includes at least one method selected from a group consisting of an ignition key, a password device, and a security display (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **36**, Jones discloses:

- wherein the at least one security method further includes a designated authorization port, wherein at least one connector is coupled to the designated authorization port to receive authorization for coupling a device to the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **37**, Jones discloses:

- wherein the plurality of network elements automatically organize in response to the node information, wherein the automatic organizing comprises automatically controlling data transfer, processing and storage among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **38**, Jones discloses:

- wherein at least one level of synchronization is supported among different subsets of the plurality of network elements, wherein a first level of synchronization is supported among a first subset of the plurality of network elements, wherein a second level of synchronization is supported among a second subset of the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **39**, Jones discloses:

- wherein the plurality of network elements are self-assembling, wherein search and acquisition modes of the at least one node search for participating ones of the plurality of network elements, wherein a determination is made whether each of the participating

ones of the plurality of network elements are permitted to join the vehicle internetwork using a message hierarchy, wherein the plurality of network elements are surveyed at random intervals for new nodes and missing nodes (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **40**, Jones discloses:

- wherein the plurality of network elements are self-assembled into a multi-cluster network, wherein a start node is selected as a base node, wherein the base node communicates an assembly packet throughout the vehicle inter-network, wherein information of the assembly packet alternates with each successive communication between directing a node to become a base node of a particular cluster number and directing a node to become a remote node of a particular cluster number, wherein the particular cluster number is incrementally changed with each successive communication of the assembly packet (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **41**, Jones discloses:

- wherein the at least one node performs service discovery, wherein service discovery comprises synchronizing the at least one node, authenticating the at least one node, determining at least one communication mode for the at least one node, and informing the at least one node of resources available among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **42**, Jones discloses:

- wherein data is collected by the at least one node, wherein at least one operation is performed on the data in response to parameters established by a user, the at least one operation selected from a group consisting of classification, routing, processing, storing, and fusing (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **43**, Jones discloses:

- wherein the data is vehicle diagnostic data, wherein diagnostic operations are performed in response to the data (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **44**, Jones discloses:

- wherein routing comprises selecting at least one communication type and at least one communication coupling for use in routing the collected data (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **45**, Jones discloses:

- wherein routing comprises selecting at least one data type for routing, selecting at least one of the plurality of network elements to which to route the selected data, selecting at least one route to the selected at least one of the plurality of network elements, and routing the selected at least one data type to the selected at least one of the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **46**, Jones discloses:

- wherein processing comprises selecting at least one data type for processing, selecting at least one processing type, selecting at least one of the plurality of network elements to perform the selected at least one processing type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the sensor network (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **47**, Jones discloses:

- wherein data processed in a plurality of nodes is aggregated for further processing by other nodes (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **48**, Jones discloses:

- wherein data processed by the at least one node is aggregated for reporting to at least one user (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **49**, Jones discloses:

- wherein storing comprises selecting at least one data type for storage, selecting at least one storage type, selecting at least one of the plurality of network elements to perform the selected at least one storage type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the plurality of network elements (abstract, col. 2, lines 1-25, col. 4,

lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **50**, Jones discloses:

- wherein fusing comprises a first node transmitting at least one query request to at least one other node, wherein the first node collects data from the at least one other node in response to the at least one query request, and processes the collected data (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **51**, Jones discloses:

- wherein the plurality of network elements comprise a plurality of application programming interfaces (APIs), wherein the APIs include APIs for application support, database services, routing, security, network management, and deployment (col. 9, lines 51-67 and col. 10, lines 1-57).

As per claim **52**, Jones discloses:

- wherein the APIs for application support, database services, and routing are hosted on at least one gateway node, wherein the APIs for security, network management, and deployment are shared among at least one gateway node and at least one port node (col. 9, lines 51-67 and col. 10, lines 1-57).

As per claim **53**, Jones discloses:

- wherein the plurality of APIs are layered, wherein the plurality of APIs enable distributed resource management by providing network resource information among the plurality of network elements, wherein information transfer among the plurality of

network elements is controlled using a synchronism hierarchy established in response to the network resource information (col. 9, lines 51-67, col. 10, lines 1-57 and col. 11, lines 45-67).

As per claim **54**, Jones discloses:

- wherein the plurality of network elements support atomic transaction methods (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **55**, Jones discloses:

- wherein the at least one node includes sensing, processing, communications, and storage devices supporting a plurality of processing and protocol layers (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **56**, Jones discloses:

- wherein the at least one node supports at least one communication mode selected from a group consisting of wireless communications, wired communications, and hybrid wired and wireless communications (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **57**, Jones discloses:

- wherein the at least one node is coupled to the at least one remote computer using the plurality of network elements, wherein the plurality of network elements includes at least one element selected from a group consisting of at least one station gateway, at

least one server, at least one repeater, at least one interrogator, and at least one network, wherein the at least one network includes wired networks, wireless networks, and hybrid wired and wireless networks (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **58**, Jones discloses:

- wherein the at least one network comprises at least one network selected from a group comprising the Internet, local area networks, wide area networks, metropolitan area networks, and information service stations (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **59**, Jones discloses:

- wherein the plurality of network elements provides remote accessibility using World Wide Web-based tools to data, code, control, and security functions, wherein data includes signals, wherein code includes signal processing, decision support, and database elements, and wherein control includes operation of the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **60**, Jones discloses:

- wherein the plurality of network elements comprise a plurality of network element sets, wherein the plurality of network element sets are layered (abstract, col. 2, lines 1-25,

col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **61**, Jones discloses:

- wherein the at least one node comprises a plurality of node types, wherein the plurality of node types includes at least one node of a first type and at least one node of a second type, wherein a first network having a first node density is assembled using the at least one node of a first type, wherein a second network having a second node density is assembled using the at least one node of a second type, wherein the second network is overlaid onto the first network (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim 62, Jones discloses:

- wherein software and data are transferable among the plurality of network elements, wherein the transfer is remotely controllable, wherein the software and the data are downloadable from at least one location selected from a group consisting of storage devices of the plurality of network elements, external storage devices, and remote storage devices (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **63**, Jones discloses:

- wherein the plurality of network elements are managed as a distributed and active database using a distributed resource management protocol, wherein the plurality of network elements are reused among different applications, wherein the network

elements are used in multiple classes of applications (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **64**, Jones further discloses:

- at least one database, wherein the at least one database includes at least one storage device selected from a group consisting of storage devices coupled to at least one of the plurality of network elements and storage devices of the at least one node (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **65**, Jones discloses:

- wherein at least one coupling among the at least one node and at least one external network supports data transfer among the at least one node of a host vehicle, wherein the data includes vehicle service data, diagnostic data, maintenance history data, security data, electronic mail, and entertainment software (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **66**, Jones discloses:

- wherein at least one coupling among the at least one peripheral electronic device and at least one external network supports data transfer among the at least one node of a host vehicle, wherein the data includes vehicle service data, diagnostic data, maintenance history data, security data, electronic mail, and entertainment software (abstract, col. 2,

lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **67**, Jones discloses:

- wherein the at least one node is coupled to at least one diagnostic device of a host vehicle (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **68**, Jones discloses:

- wherein the at least one node comprises at least one diagnostic node of a host vehicle (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **69**, Jones discloses:

- wherein the at least one node manipulates at least one data item selected from a group consisting of vehicle assembly data, vehicle maintenance data, vehicle diagnostics data, vehicle position data, vehicle operations profile data, fleet management data, fleet reliability analysis data, security system data, entertainment system data, and targeted advertising data (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **70**, Jones discloses:

- wherein at least one subset of the plurality of network elements comprise at least one sensor network, wherein the at least one subset further includes at least one sensor node, at least one gateway station, at least one server, at least: one gateway network, and at least one client computer hosting a World Wide Web browser, wherein the at least one

node is configured as the at least one gateway station and the at least one sensor node (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **71**, Jones discloses:

- wherein the at least one sensor node is coupled among a monitored environment and the at least one client computer, wherein functions of the at least one sensor node are remotely controllable using the at least one client computer, wherein the at least one sensor node provides the node information including node resource cost and message priority to the plurality of network elements, wherein data processingis distributed among the plurality of network elements in response to the node information (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **72**, Jones discloses:

- wherein at least one redundant communication pathway is established among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **73**, Jones discloses:

- wherein the at least one gateway station performs at least one function selected from a group consisting of protocol translation, sensor network management, management of transmissions from a remote user, and interfacing with at least one communication physical layer including wired local area networks, packet radio, microwave, optical,

wireline telephony, cellular telephony, and satellite telephony (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **74**, Jones discloses:

- wherein the at least one gateway network includes wired networks, wireless networks, and hybrid wired and wireless networks, wherein the at least one gateway network comprises at least one network selected from a group comprising the Internet, local area networks, wide area networks, metropolitan area networks, and information service stations (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **75**, Jones discloses a vehicle internetwork comprising a plurality of network elements including:

- at least one electronic device coupled among at least one node and atleast one vehicle bus, wherein the plurality of network elements are remotely accessible via at least one wireless Internet coupling with at least one remote computer, wherein the plurality of network elements manipulate network data including configuration and security data to provide secure interoperability among the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

As per claim **76**, Jones discloses vehicle internetwork, comprising:

- means for coupling a plurality of network elements including at least one node and at least one vehicle bus among at least one peripheral electronic device (abstract, col. 2,

lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41);

- means for manipulating node information including configuration and security information (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41);
- means for automatically assembling and configuring the plurality of network elements in response to the node information (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41);
- means for remotely controlling at least one function of the plurality of network elements (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41); and
- means for providing secure interoperability among the plurality of network elements in response to the node information (abstract, col. 2, lines 1-25, col. 4, lines 49-67, col. 5, lines 1-54, col. 6, lines 1-16, col. 17, line 67, col. 18, lines 1-55 and col. 19, lines 15-41).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,246,688 to Angwin et al

U.S. Pat. No. 6,505,100 to Stuempfle et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 703-305-7494. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

LaShonda T. Jacobs
Examiner
Art Unit 2157

ltj
December 1, 2003

MOUSTAFA M. MEKY
PRIMARY EXAMINER